CHAPTER 237 EVALUATE AVIONICS EQUIPMENT APPROVAL

Section 1 Background

1. PTRS ACTIVITY CODES

- Avionics: 5446

3. OBJECTIVE. This chapter provides guidance for evaluating the approval of avionics equipment and instruments.

5. GENERAL. The Federal Aviation Regulations require that certain avionics instruments and equipment be approved regardless of whether the aircraft is operated as an air carrier or under general aviation.

A. *Approval of Instruments and/or Equipment*

(1) The certification process for FAR Parts 121, 125, and 135 must include verification that the required instruments and equipment are approved. The instrument or equipment approval can be accomplished by the following:

- Use of a Technical Standard Order (TSO)
- Acceptance as part of the aircraft on the original Type Certificate (TC) or Supplemental Type Certificate (STC)
- Parts Manufacturing Approval (PMA)
- Field approval (FAA Form 337)

(2) Verification of approval can be accomplished by various means, such as visual inspection of the equipment manufacturer's data plate and/or review of applicable records, such as flight manual equipment lists or maintenance records.

B. *Requirements for Air Carriers Operating under a Continuous Maintenance Program.* The major components of instruments and equipment listed in the Air Transportation Association systems (22, 23, 24, 31, 33, 34, and 77) must be identified by one of the following methods:

- By name and manufacturer on the operations specifications
- On an approved document referenced and identified by the operations specifications

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 91, 121, 125, and 135, as applicable
- Successful completion of Airworthiness Inspector's Indoctrination Course for General Aviation and Air Carrier Inspections, or previous equivalent
- Knowledge of the equipment/instruments to be approved

B. *Coordination*

(1) Coordination with FAA engineering personnel and/or the equipment manufacturer may be required when previous equipment approval has not been issued or operating limitations cannot be determined (reference Vol. 2, Ch. 1, Perform Field Approval of Major Repairs and Major Alterations).

(2) Equipment approvals for air carriers may require coordination with Principal Operations or Principal Maintenance Inspectors in situations that involve lower landing minimums, long range navigation systems, flight control systems, etc.

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 21, 23, 25, 27, 29, and 43
- Advisory Circular 121, Standard Operation Specifications, as amended
- Advisory Circular 135, Air Taxi Operators and Commercial Operators, as amended

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES

A. *Review the Applicable Regulations.* Determine which instruments and/or equipment require approval.

B. *Verify Approval*

(1) If the equipment data plate does not indicate the appropriate approval status, determine through the operator's records, the method by which the equipment received approval.

(2) Ensure that all avionics equipment requiring FAA approval has the appropriate documentation for that approval. If FAA approval cannot be substantiated, the equipment and/or aircraft cannot be used until substantiated by the owner/operator.

(3) Ensure that the equipment is used only on the aircraft for which it is approved.

(4) Ensure that any spare instruments/equipment are approved. If substitutes (i.e. military) are to be used as spares, verify their approval and the authority to install them on the aircraft.

NOTE: Instruments and equipment that have not been maintained or altered in accordance with accepted practices and procedures could affect the approval basis. Changes to the basic design of avionics equipment may render the approval invalid.

C. *Review Air Carrier Documents, as Appropriate.*

Ensure that instruments and equipment are appropriately identified by one of the following methods:

(1) Make and model on the operations specifications

(2) An approved document referenced and identified on the operations specifications

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Completion of this task could result in a letter describing any limitation(s) on the use of the instrument or equipment until deficiencies are corrected or approval is obtained.

C. *Document Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Follow-up activity, as required.